



## **A view of the central-eastern Mediterranean mantle**

**C. Piromallo** (1), T.W. Becker (2), C. Faccenna (3), F. Funiciello (3), F.P. Lucente (1), L. Margheriti (1), M. Moroni (4)

(1) Istituto Nazionale di Geofisica e Vulcanologia, Rome, Italy (piromallo@ingv.it), (2) Dep. of Earth Sciences, University of Southern California, Los Angeles, USA, (3) Dip. di Scienze Geologiche, Univ. "Roma TRE", Rome, Italy, (4) DITS, Univ. "La Sapienza", Rome, Italy

The Tyrrhenian and Hellenic subduction zones share a common Neogene tectonic evolution dominated by trench retreat and consequent back arc extension, which caused the formation of the Liguro-Provençal and Tyrrhenian basins (central Mediterranean) and the Aegean basin (eastern Mediterranean). Yet, the affinities of the two subduction systems are only apparent. The large scale mantle signatures derived from seismological constraints, combined with geological data and plate kinematics, depict remarkably different evolutionary trends in terms of age, geometry, style of subduction and depth of slab penetration into the mantle. We discuss the characteristics of these two subduction systems, together with some insights from recent numerical models and laboratory experiments.